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| 09/361,372 | 07/26/1999 | JOEL M. SODERBERG | MS1-391US | 5437 |

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| EXAMINER |
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LUDWIG, MATTHEW J

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| ART UNIT | PAPER NUMBER |
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2178

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DATE MAILED: 06/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/361,372

Applicant(s)

SODERBERG ET AL.

Examiner

Matthew J. Ludwig

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 10-60 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 10-60 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. This action is responsive to communications: RCE and Amendment C filed 3/10/04.
2. Claims 1, 2, 10-60 are pending in the case. Claims 1, 14, 24, 30, 34, 40, and 51, are independent claims. Claims 3-9 have been cancelled in the application.
3. The rejection of claims 1, 2, 10-13, 30 and 31 under 35 U.S.C. 103(a) as being unpatentable over Walsh in view of Aoyama have been withdrawn as necessitated by Applicant's amendment. The rejection of claims 14-17, 23-27, and 29 under U.S.C. 103(a) as being unpatentable over Graham in view of Aoyama have been withdrawn as necessitated by Applicant's amendment.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. **Claims 1, 2, 10-17, 23-34, 40, 41, 47-51, 57-60 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bhatt et al., USPN 6,405,191 filed (7/21/99).**

In reference to independent claim 1, 34, and 40, Bhatt teaches:

Elements within a message are subjected to a subscription rule. A format of the subscription rule is known as a "Disjunctive Normal" form. Each disjunctive expression, shown in parenthesis above, is treated as a separate subscription rule and is stored in an "array of Rules". The reference provides a reasonable suggestion of individual elements (i.e. name, price,), being associated with a plurality of states (i.e. Array of Rules). See column 5, lines 15-67.

When a subscriber submits a subscription rule, the database parses the subscription rule by first normalizing the subscription rule into a series expressions joined by disjunctive operators (compare to “**associating one or more rules with each state**”). See column 5, lines 47-52.

A subscription rule may be written using any data that is supported by the relational database system such as Extensible Markup Language data types (compare to “**receiving an XML data stream**”). See column 3, lines 50-51.

An incoming message is evaluated against a set of subscription rules to determine which subscribers are to receive the. By filtering out the subscription rules that cannot possibly apply to an incoming message, what is left is a relatively small subset of subscription rules against which the incoming message is evaluated (compare to “**evaluating the XML data stream against one or more of the rules for individual elements contained in the XML data stream; and processing only those portion of the XML data stream that do not violate any of the rules that are associated with those portions**”). See column 5, lines 1-10. The reference discloses elements of an incoming message undergoing a complete evaluation against every stored subscription rule. The reference does not explicitly disclose processing only those portions of the XML data stream **that do not violate any** of the rules that are associated with those portions; however, the rules that simply cannot possibly apply to an incoming message leave a relatively small subset of subscription rules against which the incoming message is evaluated. The rules taught by Bhatt provide a reasonable suggestion of eliminating subsets of subscription rules based on an evaluation. The limitations (as presently claimed) do not preclude the Examiner from utilizing the evaluation methods of Bhatt to provide a means for determining what violates or needs to be filtered out based on a message and what should not be used to evaluate a message. It would

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have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the message/subscription rules as taught by Bhatt and utilized the fast evaluation as a mechanism to eliminate rules that need not be applied to specific messages and increasing the evaluation and utilizing a smaller set of stored subscription rules.

In reference to dependent claim 2, Bhatt teaches:

The array of subscription rules associated with each attribute operator pair provides a reasonable suggestion of a formatting rule related to elements of an XML data type. See column 5, lines 47-67.

In reference to dependent claim 10, Bhatt teaches:

The array of subscription rules associated with each attribute operator pair provides a reasonable suggestion of a formatting rule related to elements of an XML data type. See column 5, lines 47-67.

In reference to dependent claim 11, Bhatt teaches:

The subscription rules in each Array of Rules are organized in an index based on the "value" of the subscription rule. The organization of the subscription rules in an index allows for efficient fast evaluation of an incoming message. See column 6, lines 35-42.

In reference to dependent claim 12, Bhatt teaches:

The reference discloses elements of an incoming message undergoing a complete evaluation against every stored subscription rule. The reference does not explicitly disclose processing only those portions of the XML data stream *that do not violate any* of the rules that are associated with those portions; however, the rules that simply cannot possibly apply to an incoming message leave a relatively small subset of subscription rules against which the

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incoming message is evaluated. The rules taught by Bhatt provide a reasonable suggestion of eliminating subsets of subscription rules based on an evaluation. The limitations (as presently claimed) do not preclude the Examiner from utilizing the evaluation methods of Bhatt to provide a means for determining what violates or needs to be filtered out based on a message and what should not be used to evaluate a message. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the message/subscription rules as taught by Bhatt and utilized the fast evaluation as a mechanism to eliminate rules that need not be applied to specific messages and increasing the evaluation and utilizing a smaller set of stored subscription rules.

In reference to dependent claim 13, the claim reflects the computer-readable medium having a program thereon which, when executed by a computer, performs the steps of claim 1, and in further view of the following, is rejected along the same rationale.

In reference to Independent claim 14, Bhatt teaches:

If there is a very small number of subscription rules in the Array of Rules associated with the particular box in the Array of Filters, then the incoming message is evaluated against each subscription rule in the Array of rules. The reference goes further in disclosing a predetermined number of subscription rules in Array of Rules, the subscription rules would be indexed based on the value of the subscription rule. See column 8, lines 5-25. The reference provides a reasonable suggestion of a rules-based model in support of the elements within a message, which would allow for the evaluation of XML data types against the rules-based model.

An incoming message is evaluated against a set of subscription rules to determine which subscribers are to receive the. By filtering out the subscription rules that cannot possibly apply to

an incoming message, what is left is a relatively small subset of subscription rules against which the incoming message is evaluated (compare to “*evaluating the XML data stream against one or more of the rules for individual elements contained in the XML data stream; and processing only those portion of the XML data stream that do not violate any of the rules that are associated with those portions*”). See column 5, lines 1-10. The reference discloses elements of an incoming message undergoing a complete evaluation against every stored subscription rule. The reference does not explicitly disclose processing only those portions of the XML data stream *that do not violate any* of the rules that are associated with those portions; however, the rules that simply cannot possibly apply to an incoming message leave a relatively small subset of subscription rules against which the incoming message is evaluated. The rules taught by Bhatt provide a reasonable suggestion of eliminating subsets of subscription rules based on an evaluation. The limitations (as presently claimed) do not preclude the Examiner from utilizing the evaluation methods of Bhatt to provide a means for determining what violates or needs to be filtered out based on a message and what should not be used to evaluate a message. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the message/subscription rules as taught by Bhatt and utilized the fast evaluation as a mechanism to eliminate rules that need not be applied to specific messages and increasing the evaluation and utilizing a smaller set of stored subscription rules.

In reference to dependent claim 15, Bhatt teaches:

The subscription rules in each Array of Rules are organized in an index based on the “value” of the subscription rule. The organization of the subscription rules in an index allows for

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efficient fast evaluation of an incoming message. The message can be associated with different request types evaluated against different rules.

In reference to dependent claims 16, and 17, the claims recite similar limitations to those of claim 14 and 15, and in further view of the following, are rejected along the same rationale.

In reference to dependent claim 23, the claim recites a computer-readable medium having a program thereon which, when executed by a computer, performs the steps of claim 14, and in further of the following, is rejected along the same rationale.

In reference to independent claim 24, Bhatt teaches:

When a subscriber submits a subscription rule, the database parser parses the subscription rule by first normalizing the subscription rule into a series of expressions joined by disjunctive operators. A complex condition can be, for example, a combination of user defined functions, a condition that requires accessing other tables in the database beyond the message table itself. See column 6, lines 1-20. The accessing of other tables provides a reasonable suggestion of receiving XML data types and the generation of a series of calls as it parses the incoming message.

The Array of Rules are associated with the normalization of the subscription rules and based upon the parsing techniques of the incoming messages.

The reference does not explicitly state a node factory; however, the Array of Rules organized in an index and based on the value of the subscription rule provide an association of elements and a representation of rules based on those elements. The organization and representation of these rules in an index provides a similar job of evaluating an incoming message. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have utilized the array of subscription rules associated with each attribute to provide

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a similar function of associating the schema configured to evaluate the normalization of the subscription rule for efficient fast evaluation of an incoming message.

In reference to dependent claim 25, Bhatt teaches:

Each Array of Rules is associated with one of the attribute pairs in the Array of Filters.

See column 5, lines 60-65.

In reference to dependent claim 26, Bhatt teaches:

What is left is a relatively small subset of subscription rules against which the incoming message is evaluated. See column 5, lines 1-15.

In reference to claims 27, 28, and 29, the claim limitations recite similar language as those of claims 24, 18, and 28, and in further view of the following, are rejected under similar rationale.

In reference to independent claim 30, Bhatt teaches:

When a subscriber submits a subscription rule, the database parser parses the subscription rule by first normalizing the subscription rule into a series of expressions joined by disjunctive operators. A complex condition can be, for example, a combination of user defined functions, a condition that requires accessing other tables in the database beyond the message table itself. See column 6, lines 1-20. The accessing of other tables provides a reasonable suggestion of receiving XML data types and the generation of a series of calls as it parses the incoming message.

The Array of Rules are associated with the normalization of the subscription rules and based upon the parsing techniques of the incoming messages.

The reference does not explicitly state a node factory; however, the Array of Rules organized in an index and based on the value of the subscription rule provide an association of elements and a representation of rules based on those elements. The organization and

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representation of these rules in an index provides a similar job of evaluating an incoming message. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have utilized the array of subscription rules associated with each attribute to provide a similar function of associating the schema configured to evaluate the normalization of the subscription rule for efficient fast evaluation of an incoming message.

In reference to dependent claims 31-33, the claims recite similar language to those of claims 24, 18, and 28. In further view of the following, the claims are rejected under similar rationale.

In reference to dependent claim 41, Bhatt teaches:

The array of subscription rules associated with each attribute operator pair provides a reasonable suggestion of a formatting rule related to elements of an XML data type. See column 5, lines 47-67.

In reference to dependent claims 47-50, the claims recite similar limitations to those of claims 1-3, and in further view of the following are rejected under similar rationale.

In reference to independent claim 51, Bhatt teaches:

Elements within a message are subjected to a subscription rule. A format of the subscription rule is known as a “Disjunctive Normal” form. Each disjunctive expression, shown in parenthesis above, is treated as a separate subscription rule and is stored in an “array of Rules”. The reference provides a reasonable suggestion of individual elements (i.e. name, price,) being associated with a plurality of states (i.e. Array of Rules). See column 5, lines 15-67.

When a subscriber submits a subscription rule, the database parses the subscription rule by first normalizing the subscription rule into a series expressions joined by disjunctive operators (compare to “associating one or more rules with each state”). See column 5, lines 47-52.

A subscription rule may be written using any data that is supported by the relational database system such as Extensible Markup Language data types (compare to “*receiving an XML data stream*”). See column 3, lines 50-51.

An incoming message is evaluated against a set of subscription rules to determine which subscribers are to receive the. By filtering out the subscription rules that cannot possibly apply to an incoming message, what is left is a relatively small subset of subscription rules against which the incoming message is evaluated (compare to “*evaluating the XML data stream against one or more of the rules for individual elements contained in the XML data stream; and processing only those portion of the XML data stream that do not violate any of the rules that are associated with those portions*”). See column 5, lines 1-10. The reference discloses elements of an incoming message undergoing a complete evaluation against every stored subscription rule. The reference does not explicitly disclose processing only those portions of the XML data stream *that do not violate any* of the rules that are associated with those portions; however, the rules that simply cannot possibly apply to an incoming message leave a relatively small subset of subscription rules against which the incoming message is evaluated. The rules taught by Bhatt provide a reasonable suggestion of eliminating subsets of subscription rules based on an evaluation. The limitations (as presently claimed) do not preclude the Examiner from utilizing the evaluation methods of Bhatt to provide a means for determining what violates or needs to be filtered out based on a message and what should not be used to evaluate a message. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the message/subscription rules as taught by Bhatt and utilized the fast evaluation as a

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mechanism to eliminate rules that need not be applied to specific messages and increasing the evaluation and utilizing a smaller set of stored subscription rules.

In reference to claims 57-60, the claims recite similar limitations to those of claims 1-4, and in further view of the following, are rejected under similar rationale.

6. **Claims 18-22, 35-39, and 42-46, 52-56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bhatt as applied to claim 14 above, and further in view of Fred Dridi & Gustaf Neumann's 'How to implement Web based Groupware Systems based on WebDAV, June 18, 1999, herein after referred to as Dridi.**

In reference to claim 18-22, 35-39, 42-46, and 52-56, the rejection of independent claim 14 above is incorporated herein. Bhatt does not teach WebDAV request types. However, Dridi discloses WebDAV as a standard infrastructure for asynchronous collaborative authoring across the Internet in order to turn the Web into a collaborative environment. The core features of WebDAV are metadata management, namespace management, collections, overwrite prevention, version management, and access control. This WebDAV reference does not explicitly disclose using WebDAV methods for use with XML data streams and parsing systems; however, using WebDAV request types with markup languages to provide a coherent set of authoring operations was well known in the art at the time the invention was made. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the well known WebDAV request types taught by Dridi to form request types associated with XML data streams for a more efficient application environment in a messaging environment. See pages 2 & 3.

Response to Arguments

6. Applicant's arguments with respect to claims 1, 2, 10-60 have been considered but are moot in view of the new ground(s) of rejection.

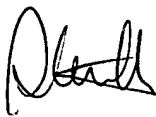
Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew J. Ludwig whose telephone number is 703-305-8043. The examiner can normally be reached on 8:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Heather Herndon can be reached on 703-308-5186. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ML
May 21, 2004


STEPHEN S. HONG
PRIMARY EXAMINER